WHAT IS CLAIMED IS:

1. A microphone array, comprising:

an array of at least one microphone;

a memory contained within the array, said memory including parametric information which defines operational characteristics and configuration of the array;

an array interface for connecting the array to an external computing device; and

wherein the parametric information included in the memory is reported to the external computing device via the array interface upon connection of the array to the external computing device.

2. The microphone array of claim 1 wherein the memory is a rewritable-type memory.

3. The microphone array of claim 2 wherein the array further comprises a self-calibration system for automatically evaluating the parametric information which defines operational characteristics and configuration of the microphone array.

4. The microphone array of claim 3 wherein the parametric information is automatically updated to reflect a current configuration state of the array as identified by automatically evaluating the parametric information which defines operational characteristics and configuration of the microphone array.

5. The microphone array of claim 3 wherein each microphone in the array further includes an associated preamplifier, and wherein the self-calibration system automatically determines gain of each microphone and associated preamplifier in the microphone array.

6. The microphone array of claim 1 further comprising a set of at least one speaker, and wherein parametric information which defines operational characteristics and configuration of each speaker is included in the memory contained within the microphone array.

7. The microphone array of claim 1 wherein the parametric information included within the memory contained within the microphone array includes information defining audio capture characteristics of the microphone array.

8. The microphone array of claim 1 wherein the array interface for connecting the microphone array to the external computing device is any of a wired and a wireless computer interface.

9. The microphone array of claim 1 further comprising one or more preamplifiers and one or more analog-to-digital (A/D) converters, said preamplifiers being used to preamplify analog signals captured by each microphone in the array, and said A/D converters being used to convert each preamplified analog audio signal to create a digital audio signal from each analog audio signal.

10. The microphone array of claim 3 wherein the self calibration system operates automatically for evaluating the parametric information which defines operational characteristics and configuration of the array as soon as the array is connected to the external computing device via the array interface.

11. The microphone array of claim 3 wherein the self calibration system operates automatically for evaluating the parametric information which defines operational characteristics and configuration of the array upon a user calibration request transmitted to the microphone array from the external computing device via the array interface.

12. The microphone array of claim 3 wherein the self calibration system operates automatically for evaluating the parametric information which defines operational characteristics and configuration of the array upon an external calibration request transmitted to the microphone array from the external computing device via the array interface, said external calibration request being generated by audio processing software residing within the external computing device.

13. The microphone array of claim 1 wherein one or more of the microphones comprising the array of at least one microphone are MEMS-type microphones.

14. A method for automatically adapting audio processing software for optimally processing audio signals captured by a microphone array, comprising using a computing device to:

automatically configure audio processing software operating within an external computing device to reflect a current configuration of a microphone array, said microphone array including at least one microphone, and said microphone array being coupled to the external computing device via any of a wired and a wireless computer interface;

wherein the microphone array automatically determines the current configuration upon being coupled to the external computing device via the computer interface; and

wherein the microphone array automatically reports the current configuration to the external computing device via the computer interface after the microphone array automatically determines the current configuration.

15. The method of claim 14 wherein automatically determining the current configuration comprises automatically determining magnitude and phase gains for each microphone in the microphone array.

16. The method of claim 14 wherein the current configuration of the microphone array is stored locally within the microphone array within a microphone array memory.

17. The method of claim 16 wherein the microphone array memory is a programmable memory, and wherein the current configuration is stored within the programmable memory in an addressable lookup table.

18. The method of claim 17 wherein the current configuration stored within the addressable lookup table includes information defining audio capture characteristics for each microphone in the microphone array.

19. The method of claim 14 wherein the microphone array further provides a separate audio signal for each microphone in the microphone array to the external computing device via the computer interface.

20. The method of claim 19 wherein each separate audio signal provided to the external computing device is a digital audio signal, and wherein the microphone array includes one or more preamplifiers and one or more analog-to-digital (A/D) converters, said preamplifiers being used to preamplify analog signals captured by each microphone in the microphone array, and said A/D converters being used to convert each preamplified analog audio signal to create each digital audio signal.

21. The method of claim 14 wherein the microphone array automatically determines the current configuration upon a manual user calibration request transmitted to the microphone array from the external computing device via the computer interface.

22. The method of claim 14 wherein the microphone array automatically determines the current configuration upon an external calibration

request transmitted to the microphone array from the external computing device via the computer interface, said external calibration request being generated by the audio processing software operating within the external computing device.

23. The method of claim 14 wherein at least one of the microphones included in the microphone array are MEMS microphones, each said MEMS microphone comprising an integrated circuit including one or more microphones, preamplifiers and A/D converters.

24. A system for automatically providing device configuration information of a microphone array to an external computing device, comprising:

a microphone array including at least one microphone, each microphone having a predetermined position in a three-dimensional space relative to the microphone array;

said microphone array further including at least one addressable memory, said addressable memory storing parametric information detailing device configuration information of the microphone array; and

wherein the microphone array automatically reads the parametric information from the addressable memory and reports the parametric information to the external computing device via a computer interface, said external computing device being remotely coupled to the microphone array via the computer interface.

25. The system of claim 24 wherein the microphone array further includes an automatic self-calibration circuit for automatically determining the parametric information detailing the device configuration information of the microphone array.

26. The system of claim 24 wherein the at least one addressable memory is automatically updated by the microphone array to include the

automatically determined parametric information detailing the device configuration information of the microphone array.

27. The system of claim 24 wherein the parametric information stored within the at least one addressable memory includes audio capture characteristics for each microphone in the microphone array.

28. The system of claim 24 wherein the microphone array further includes a set of at least one speaker for reproducing one or more audio signals, and wherein the parametric information detailing the device configuration information of the microphone array further includes audio playback characteristics of each speaker included in the microphone array.

29. The system of claim 24 wherein the computer interface is any of a wired and a wireless computer interface.

30. The system of claim 24 further comprising automatically configuring audio processing software operating within the external computing device to reflect the parametric information reported to the external computing device via the computer interface for optimally processing one or more audio signals acquired by the at least one microphone of the microphone array, said audio signals being provided to the external computing device from the microphone array via the computer interface.